

**Notice of Allowability****Application No.**

09/846,191

**Examiner**

Pedro J. Cuevas

**Applicant(s)**

KIM ET AL.

**Art Unit**

2834

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on May 12, 2003.
2. ☒ The allowed claim(s) is/are 4-6 and 10.
3. ☒ The drawings filed on 02 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
- (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
- (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1 ☒ Notice of References Cited (PTO-892)
- 3 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 5 ☐ Information Disclosure Statements (PTO-1449), Paper No. \_\_\_\_\_.
- 7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 2 ☐ Notice of Informal Patent Application (PTO-152)
- 4 ☐ Interview Summary (PTO-413), Paper No. \_\_\_\_\_.
- 6 ☐ Examiner's Amendment/Comment
- 8 ☒ Examiner's Statement of Reasons for Allowance
- 9 ☐ Other

**DETAILED ACTION**

*Allowable Subject Matter*

1. Claims 4-6 and 10 are allowed.
2. The following is an examiner's statement of reasons for allowance.

Danov clearly teaches the construction of a converter with piezoceramic transformer comprising:

a piezoelectric block having first and second faces to convert electric signal into mechanical vibration by outline vibration mode;

an input electrode having a substantially rhombic shape and disposed closer to a central region of each side than to a corner region on the first face of the piezoelectric block, the electric signal being inputted to the input electrode;

an output electrode separated from the input electrode by a predetermined constant distance at a peripheral region on the first face so that its size at the central region of each side is smaller than its size at the corner region, the output electrode converting the mechanical vibration into an electric signal and outputting the converted electric signal; and

a common electrode on the second face of the piezoelectric block;

wherein the common electrode is:

formed on the second face of the piezoelectric block in a plurality of isolations to prevent the input of the noise, and

facing with the input and output electrodes.

Ishitoko et al. teach the construction of a vibrating gyroscope having a substantially cross shape electrodes for the purpose of determining angular velocity centered around axes in two directions.

The prior art of record, taken alone or in combination, fails to disclose a piezoelectric transformer as disclosed by independent claim 10, including:

an input electrode having a substantially diamond shape and disposed closer to a central region of each side than to a corner region on the first face of the piezoelectric block; and

an output electrode separated from the input electrode by a predetermined constant distance at a peripheral region on the first face so that its size at the central region of each side is smaller than its size at the corner region.

Dependent claims 4-6 are considered allowable by their dependence on allowed independent claim 10.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

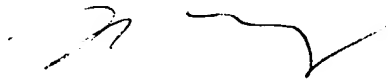
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Pedro J. Cuevas  
May 23, 2003